

**REMARKS**

Claims 32-40, 42, 43, 47-55, 57, 58, 61, and 68-75 are pending in the application with claims 40, 55, and 73 amended herein and claims 41, 44-46, 56, 59, 60, 62-67, and 76-82 canceled herein.

Claims 32-82 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U. S. Patent No. 6,348,139. Applicant herewith submits a timely filed terminal disclaimer obviating the need for the double patenting rejection and requests withdrawal of same. With the withdrawal of the double patenting rejection, no grounds for rejection are alleged for claims 32-37, 42, 43, 47-54, 57, 58, 61, 68-72, 74, and 75. Accordingly, Applicant asserts that such claims are in condition for allowance.

Claims 76-82 stand rejected under 35 U.S.C. 112, first paragraph, as lacking an enabling description in the specification. Claims 76-82 also stand rejected under 35 U.S.C. 112, first paragraph, as lacking a proper description in the specification. Claims 62-67 further stand rejected under 35 U.S.C. 112, first paragraph, as lacking a proper description in the specification. Without admitting to the propriety of such rejections, Applicant herein cancels claims 62-67 and 76-82 without prejudice in favor of advancing prosecution of the remaining claims while reserving the opportunity to present the subject matter of the canceled claims in the present or subsequent application. Accordingly, Applicant requests withdrawal of the indicated rejections.

Claims 38-41, 44-46, 55, 56, 59, 60, 62-67, 73, and 76-82 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wright. Applicant requests reconsideration.

Claim 38 sets forth a tantalum disc including, among other features, at least about 99.95 weight percent tantalum and a maximum grain size of less than 50 microns. Pages 4-5 of the Office Action allege that Wright discloses each and every limitation of claim 38 and makes reference to page 3, section B of Wright as disclosing the claimed grain size. However, review of Wright and page 3, section B reveals that Wright does not disclose or suggest a maximum grain size of less than 50 microns. The referenced text of Wright describes "individual grains as large as 100  $\mu\text{m}$  were observed near the plate surface." It is thus apparent that Wright does not disclose a maximum grain size of less than 50 microns, as set forth in claim 38. At least for such reason, Wright fails to disclose each and every limitation of claim 38 and does not anticipate claim 38. Claim 39 depends from claim 38 and is not anticipated at least for such reason as well as for the additional limitations of such claim not disclosed.

Amended claim 40 sets forth a tantalum disc including, among other features, an average grain size of about 25 microns and a maximum grain size of less than 50 microns. As may be appreciated from the discussion above regarding the deficiencies of Wright as applied to claim 38, Wright does not anticipate claim 40.

Amended claim 55 sets forth a tantalum plate that includes, among other features, an average grain size of about 25 microns and a maximum grain size of less than 50 microns. As may be appreciated from the discussion above regarding the deficiencies of Wright as applied to claim 38, Wright does not anticipate claim 55.

Amended claim 73 sets forth a tantalum sputtering target that includes, among other features, at least about 99.95 weight percent tantalum and a substantially uniform texture across a surface and throughout a thickness of the target. Page 5 of the Office

Action alleges that Figs. 4, 5, and 7 of Wright disclose the claimed sputtering target. However, reference to Fig. 5 and its accompanying text, along with the remainder of Wright, reveals that such reference does not disclose a substantially uniform texture across a surface and throughout a thickness of the target. Page 8 of Wright states that “grains near the center of the plate still show a strong preference for {111} planes.” In contrast, “grains near the surface of the plate exhibit a preference for {100} planes.” Accordingly, Wright does not disclose a substantially uniform texture across a surface and throughout a thickness of the target, as set forth in claim 73. Thus, Wright does not anticipate claim 73.

Claims 41, 44-46, 56, 59, 60, 62-67, and 76-82 are canceled herein. Applicant requests withdrawal of the rejection and allowance of remaining claim 38-40, 55, and 73 in the next Office Action.

Claims 38-41, 44-46, 55, 56, 59, 60, 62-67, 73, and 76-82 stand rejected under 35 U.S.C. 102(b) as being anticipated by Friedman. Applicant requests reconsideration.

The subject matter of claim 38 is described above. Page 5 of the Office Action alleges that Friedman describes the claimed maximum grain size of less than 50 microns and refers to page 337, column 1 and page 340, column 2. However, reference to the recited text and elsewhere throughout Friedman does not reveal disclosure of a maximum grain size of less than 50 microns. Instead, the recited text merely discusses average grain size. As known to those of ordinary skill and supported by page 3 of Wright discussed above, a recitation of average grain size does not dictate any particular maximum grain size. For example, Wright describes average

grain size of 23 to 24 microns with a maximum grain size of 100 microns. Those of ordinary skill would expect similar results in Friedman and would not conclude that Friedman discloses a maximum grain size of less than 50 microns, as set forth in claim 38. At least for such reason, Friedman does not disclose each and every limitation of claim 38 and does not anticipate such claim. Claim 39 depends from claim 38 and is not anticipated at least for such reason as well as for the additional limitations of such claim not disclosed.

The subject matter of amended claim 40 is described above. As may be appreciated from the discussion regarding the deficiencies of Friedman as applied to claim 38, Friedman does not anticipate claim 40.

The subject matter of amended claim 55 is described above. As may be appreciated from the discussion regarding the deficiencies of Friedman as applied to claim 38, Friedman does not anticipate claim 55.

The subject matter of claim 73 is described above. Pages 5-6 of the Office Action allege that the Friedman process "is substantially identical (deformation and anneal)" to the method recited in the present specification for producing the tantalum sputtering target of claim 73. The Office Action thus concludes that those of ordinary skill would find the properties of the Friedman product to be the same of those of the claimed tantalum sputtering target even though Friedman does not provide any mention of texture and does not disclose a substantially uniform texture across a surface and throughout a thickness of the Friedman product. Applicant traverses.

Applicant notes that Wright also describes a method that involves deformation and anneal at least on pages 8-9. However, as asserted herein, Fig. 5 of Wright shows


that deformation and anneal fails to produce a substantially uniform texture across a surface and throughout a thickness of the target. The Office Action does not provide any disclosure or suggestion in the prior art that deformation and anneal necessarily produce a tantalum sputtering target with a substantially uniform texture across a surface and throughout a thickness of the target. Instead, the Office Action makes the allegation without any support in the prior art. Applicant asserts that the prior art contradicts the allegation of the Office Action and asserts that the Office Action conclusion is thus improper. Accordingly, Friedman fails to disclose each and every limitation of claim 73 and does not anticipate such claim.

Applicant asserts that claims 38-40, 55, and 73 are not anticipated by Friedman and request allowance of such claims in the next Office Action. The remaining rejected claims are canceled herein and Applicant request withdrawal of the rejection.

Applicant herein sets forth adequate reasons supporting patentability of claims 32-40, 42, 43, 47-55, 57, 58, 61, and 68-75 and requests allowance of all pending claims in the next Office Action.

Respectfully submitted,

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